Bianca Saputra

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EDUCATION

Duke University   **Durham, North Carolina**

B.S. in Computer Science, Minors in Computational Biology and Religious Studies   *Expected May 2022*

- **GPA:** 3.794/4.0
- **Relevant Coursework:** Data Structures and Algorithms, Linear Algebra, Machine Learning Methods and Practice, Discrete Mathematics, Probability, Computer Architecture, Multivariable Calculus, Molecular Biology.

SKILLS & ACTIVITIES

Languages: Python, Java, C, Javascript, HTML, CSS
Tools: Stata, Qualtrics, Mathematica, Microsoft Office
Activities: Data Structures and Algorithms Peer Tutor, Rewriting the Code Fellow, DTech Scholar

PROJECTS

Improving Thyroid Malignancy Identification   **May 2020**

- Developed a data input pipeline to identify separate nuclei to improve the performance and the interpretability of a thyroid malignancy classifier using **Pytorch** ML software libraries.
- Applied density-based spatial clustering (DBSCAN) and RGB thresholding to pathology slides to isolate nuclei and create binary segmentation masks.
- Compared performance of a binary classifier trained on traditional thyroid pathology slides (AUC .86) versus trained on segmentation masks (AUC .77) to quantify impact of nuclei on classification.

Deep Learning for Facial Paralysis Detection   **November 2019**

- Implemented a deep convolutional neural network to classify if an individual is presenting facial droop symptoms with AUC .85 using **Tensorflow** ML software libraries.
- Scraped images and used data augmentation techniques to create custom datasets.

WORK & EXPERIENCE

Google   **New York City, New York**

Incoming Student Training in Engineering Program Intern   May 2020 - August 2020

- Search Platforms Team

Duke University   **Durham, North Carolina**

Undergraduate Teaching Assistant: Introduction to Computer Science   August 2019 - Present

- Taught **Python** concepts and provided guidance to students in weekly consulting hours.
- Ran lab discussion for 30 students weekly to guide further exploration of course materials.
- Led weekly tutoring sessions to support 7 students struggling in the course.

University of Chicago, Booth School of Business   **Chicago, Illinois**

Research Assistant at Honesty, Morality, & Ethics Lab for Prof. Emma Levine   July 2019 - August 2019

- Analyzed n-grams from written opinions about lie justification using **Python**.
- Cleaned data and ran data analysis with **Stata** to prepare datasets for publication review.
- Investigated how an individual's value system shapes their behavior by developing stimuli to run studies in **Qualtrics**.

Center for Global Women's Health Technologies   **Durham, North Carolina**

Ignite Student Fellow, Paul Farmer Grant recipient   January 2019 - June 2019

- Spearheaded a 2-week workshop to build community capacity by teaching students to identify and solve needs in their community using a human-centered design approach to engineering.
- Taught basics of circuitry theory and hardware construction to 40 middle-schoolers at a school in Guatemala.